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ABSTRACT

Ninety-six second and third grade children were exposed to one of six types of videotaped models. Children witnessed an adult female practice either charitable or selfish behavior. One-third of the subjects in each group heard the model exhort either charity or greed or verbalize normatively neutral material. Following this exposure, half the children within each group received social reinforcements from the model for responses minimizing material rewards, while the other half obtained no social rewards. An interaction of model's practices, preachings and social reinforcements was found: the model who practiced and preached charity and rewarded self-denial responses elicited the greatest number of such responses from the children. The model who preached and practiced charity but did not reward it, elicited the least number of the responses. Children's judgments of the model's niceness were determined by the model's preachings and practices, not by the rewards. (Author)

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WORDS AND DEEDS ABOUT ALTRUISM AND THE SUBSEQUENT REINFORCEMENT POWER OF THE MODEL[1]

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Recently, considerable attention has been given to role of models in affecting helping behavior (see reviews by Bryan and London, 1970; Krebs, 1970, Midlarsky, 1968). There is now little question that altruistic models evoke similar behavior from observing others. As Bandura (1969) has pointed out however, experiments of modeling effects have typically focused upon the role of the exemplar's motor behavior in altering the motor behavior of the observer. Experiments in imitative generosity have been no exception to this emphasis. Relatively unexplored have been the consequences of the model's conformity to the norm of giving (Leeds, 1963), upon his attractiveness to others (Bryan and Walbek, 1970, a, b) or upon his ability to influence observers through techniques other than behavioral example.

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The present experiment studied the effectiveness of social reinforcement by a model who demonstrated varying degrees of commitment to the norm of giving (Leeds, 1963) or social responsibility (Berkowitz and Daniels, 1963). Of interest was the relative effect of the model's allegiance to such norms on his ability to influence the subsequent behavior of the observing child through verbal approval. Of particular concern was the extent to which model inconsistency in words and deeds

might affect the incentive value of his verbal approval. Rosenhan, Frederick, and Burrowes (1967) have found that the imposition of double standards by an adult model increased the "thefts" of observing children and thus suggested that adult hypocrisy may stimulate anti-social behavior. On the other hand, Bryan and Walbek (1970, a, b) failed to find that inconsistency between the model's moral exhortations and his deeds affected either the child's altruistic behavior or his judgments of that model. They determined that children's moral or social judgments of a peer model were the result of two main effects, the model's preachings and practices, and that these two sources showed an additive, not interactive, relationship. Thus the model who preached charity but practiced greed (i.e. the hypocrite) and the model who preached greed by practiced charity (i.e. the young republican) were judged relatively favorably as compared to those who practiced greed and verbalized normatively neutral material. As socialization agents are likely to preach a better game than they practice (DeFleur and Westie, 1963) and often employ social reinforcement in their attempts to affect the children's behavior (Emmerich, 1969), it would appear worthwhile to assess the impact of verbal and behavioral references to a well adopted norm of giving (Bryan and Walbek, 1970, a) on that agent's subsequent ability to influence, through verbal reinforcements, children's behavior. Insko and Cialdine (1969) have demonstrated that the subjects' attraction to the verbal reinforcer is positively related to the efficacy of the reinforcements. Insofar as children's judgments of a model are altered by the model's verbal and behavioral allegiances to the norm of giving, such allegiances by the model would be

expected to have an impact upon his social reinforcement power.

The experimental design was a randomized block design with three types of verbal appeals (exhortations for charitable or greedy behavior, or verbalizations of normatively neutral material), two types of behavioral example (charitable vs. greedy responses), and two levels of social reinforcement by the model (present or absent), with groups matched on Ss' grade and gender.

Method

Subjects, model, and experimenter. Ninety-six second and third-grade Caucasian children drawn from 2 schools serving a middle class residential area, participated in the experiment. Ss were sequentially assigned to the 12 experimental conditions as they appeared individually for the experiment. Within each condition, there were four males, two from each of the second and third grades, and four females, two from each of the second and third grades. Both E and the model were senior psychology undergraduates; E was male, the model was female.

Materials and apparatus. The study was conducted in a trailer parked on the school grounds. The experimental room contained a 8" x 10" television monitor and a two-lever press game similar to that used by Midlarsky and Bryan (1967). Pressing one lever yielded an M & M candy, pressing the other illuminated a bright light. Both levers were appropriately labeled. The rewards with both levers were on identical variable ratio schedules. The press of each lever would yield rewards on presses 2, 6, 10, 11, 14 23, 24, 27, 31, 36, 39, 48, and 49.

The model's preachings and practices were presented by video tape. A film of approximately 5 minutes duration, depicted an experimental room that was arranged identically to that described by Bryan and Walbek (1970, a, Experiment III). Thus, the materials employed consisted of a bowling game, ten stacks of three nickels each, a March of Dimes poster and canister.

Procedures. Ss were informed that they were testing a new game for the experimenter but before doing so, they were to watch a television show of a girl playing a game in another room. Ss were thus led to believe that the videotaped material was of events taking place in an adjacent room. E then left S and presented the film. The filmed sequence for each treatment condition began in an identical manner. The model was seen standing alone in the experimental room, whereupon E entered. E told the model that he was testing a new bowling game, and that whenever the model obtained a score of 20, she was to take a stack of three nickels. She was told that she could donate some of her winnings and "help the crippled children" by placing money in the March of Dimes canister. The optional nature of the donation was stressed. E then left the room. The model then acknowledged over a microphone that the S could see and hear her. She then imposed one of the six experimental treatments as she played the bowling game for a total of 10 trials. The model's verbalizations were given after each randomly determined no-win trials. These verbalizations were identical to those employed by Bryan and Walbek (1970, Experiment II). The model's preaching of charity were: "People should give to the crippled children," (trial one); "I think I ought to give,"

(trial three); "It's good to give to the children like that," (trial four); "I think people ought to give to the crippled children," (trial five); "There are good reasons to give to those crippled children" (trial ten). Exhortations emphasizing selfish behavior were identical to those preaching charity except for the insertion of a negative into the statements. Normatively neutral verbalizations simply indicate the attractiveness of the game (e.g. "This game is fun.").

The model's practices were demonstrated on the five winning trials. In the practice charity condition, the model donated all of her winnings to the March of Dimes. In the practice greed condition, she conspicously placed them in her purse. The film ended with the model picking up her purse and turning off the camera.

Both the E and the model then entered the experimental room. After identifying the model as the woman in the other room, E informed S that he could now play the lever game and demonstrated how to do so by pressing each lever twice. E then left the room, while the model remained and observed S. Ss were allowed a total of 50 lever presses. For half the Ss within each of the six treatment conditions, the model reinforced S at the onset of the blue light by saying "good" or "good, the blue light came on." For the remaining Ss, the model remained silent.

Following the completion of the game, the model left the room and E reentered. E then questioned S on his recall of the filmed material by asking S to select the correct alternative among several which described the model's words and deeds (e.g. did the woman in the film keep all of her money, or give some to the poor children?). Ss were also asked whether

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they thought the model was "very nice," "nice," "not nice," or "very bad." Finally E cautioned each S not to relate any details of the experiment to the other children.

Results

The model's reinforcement effect was assessed by comparing groups on the frequency with which they pressed the lever associated with the light. An analysis of variance, using the sex of S, the grade of S, the model's preachings, the model's practices, and the level of social reinforcement as variables yielded one significant and one marginally reliable interaction. The interaction of the model's preachings, practices and reinforcements were significant ($F=3.26$, $df=2/48$, $p < .05$). As expected, the model who exhorted charity, practiced it, and socially reinforced the lever pressing response, elicited the greatest number of such responses ($\bar{X}=28.0$). Contrary to predictions, however, was the finding that Ss exposed to the model who both practiced and preached charity but did not give social reinforcements, emitted the fewest such responses ($\bar{X}=16.25$). Comparison of the 12 means involved in this interaction by Newman-Keuls test revealed that only these two extreme groups differed significantly ($p < .01$). The interaction of the model's preachings and social reinforcement approached significance ($F=3.5$, $df=48$, $p < .052$) and reflected the same general orderings of the means. No main effects or other interactions were significant.

Ss' judgments of the niceness of the model were assigned scores of one (low attraction) through four (high attraction) and analyzed by analysis of variance. Since a four point scale provides little variance,

alpha error was set at the .01 level (Guilford, 1956). Two main effects reached significance, that of the model's practices ($F=19.60$, $df=2/48$, $p < .001$) and her preachings ($F=12.18$, $df=2/48$, $p < .001$). No other main effects nor any interactions were significant. The mean niceness rating given the charitable acting model was 3.44, that assigned to the selfish one was 2.85. The mean ratings of the model preaching charity, greed, or normatively neutral material were 3.41, 3.34, 2.69 respectively. A Newman-Keuls analysis indicated that the model exhorting greed was judged significantly less attractive than either the model who preached charity or the one who verbalized normatively neutral material ($p < .01$). The latter two groups did not differ.

Of the 96 Ss, 16 erred in their recognition of the experimental manipulations. Since previous studies (Bryan and Walbek, 1970, a) have indicated that inconsistent inputs produced the greatest number of such errors, the present data were analyzed by comparing the proportion of Ss making errors in reporting the model's consistent preachings and practices (e.g., preaching and practicing charity), to those exposed to contradictory inputs (e.g., preaching charity but practicing greed). Of the 32 Ss exposed to inconsistent inputs, 11 were unable to correctly recognize the model's preachings and practices. Of the remaining 64 Ss shown the consistent model, five committed such errors. The Chi-square value, corrected for continuity, was 9.01 ($p < .01$).

Discussion

The results of the present experiment support the general prediction that the influencing strength of a social reinforcer interacts with

a model's verbal and behavioral allegiances to the norm of giving (Leeds, 1963). The model who both preached and practiced charity had the greatest reinforcing power. Surprisingly, the greatest number of lever presses for the candy were by children exposed to the model who did not socially reward lever presses. This interaction cannot easily be explained either by differences in the attractiveness of the two types of models (mean ratings of 3.75 and 3.62) or by some hypothesis concerning the combined effects of modeling and social reinforcement upon children's self-sacrificing behavior.

It is well known that children, when faced with a binary choice situation, often do not act "intelligently," that is, do not maximize their possibilities of obtaining rewards. Gruen and Weir (1964), Rosenhan (1966), and Weir (1964), report that young children are likely to exhibit either single or double alternation strategies and are, compared with older Ss, relatively unaffected by reinforcement contingencies. While analysis of the present data did not reveal the use of either strategy by the Ss, it was clear that the behavior of most Ss was not governed by either material or social rewards. Ss in the experiment distributed their presses rather evenly between the two levers ($\bar{X}$=23 blue light presses). The finding that Ss increase their rewards when interacting with a well-liked model is similar to those reported by Bandura, Grusec and Menlove (1967). These investigators found that children who were exposed to a "warm" model subsequently demonstrated lower standards for self-rewards of material incentives than those interacting with a model shown less nurturance. Similarly in the present study, the "good" model, who failed

to explicate appropriate standards of behavior by means of social reinforcement, increased the likelihood of the S seeking other available rewards. It thus appears that models who appear "nice" to the observing child, be it by means of the model's conforming to a well established social norm or through more personal interactions, may free the child to maximize his reinforcements. If the model is well liked, his social reinforcements assume greater incantive value. If he is well liked, but gives not such rewards, other available rewards are more freely sought.

As in previous experiments (Bryan and Walbek, 1970 a, b) the children's judgments of the attraction of the model were based upon two main effects, the latter's words and deeds. As before, inconsistency or hypocrisy did not serve to attenuate the model's attraction over that expected on the basis of an additive relationship between model's words and deeds. What is perhaps surprising is the strength of these verbal and behavioral allegiances relative to those stemming from social reinforcement. There is evidence that social reinforcement increases the recipient's esteem for the reinforcer (Bryan and Lichtenstein, 1966). The data from the present experiment however would suggest that a model's social allegiance to a well accepted norm (Bryan and Walbek, 1970, a) may take precedence over that of positive social reinforcement in determining children's judgments of others. While the validity of a single item as a measure of attraction is always questionable, it should be noted that responses to this item have been shown to correlate significantly with judgments concerning a model's naughtiness and likability, with Ss' preferences for the model in social interactions (Bryan[2]), and with a behavioral measure

wherein Ss indicated their preferences for one of two souvenirs, one being imprinted with the model's name, the other with the name of the experimenter (Schwartz, 1970).

Finally, the findings pertaining to the recognition errors of the Ss replicate those of Bryan and Walbek (1970, a). It now seems indisputable that children have difficulty in learning and/or remembering either the verbal or motor behavior of a briefly presented model when the stimulus inputs are contradictory. It is thus unlikely that children within the ages of six to 10 years have a history of conditioning which would allow them to evaluate another on the basis of the latter's consistency in his preachings and practices.

In summary, the data suggests that a social reinforcer's behavioral and verbal allegiances to the norm of giving will affect his subsequent social influence upon a child. If such verbal and behavioral allegiances are demonstrated without use of subsequent social reinforcement, the child will assume a strategy of maximizing his own material reinforcement. If the same type of model socially reinforces the child's self-denial behaviors, these responses are increased. Both verbal and behavioral support of charity increases the child's attraction to the model and these effects override those produced by social reinforcement. No evidence was found which would suggest to the investigator that hypocrisy or model inconsistency detracts from the model's attractiveness for the child.

Footnotes

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2. Bryan, J. H. Children's judgments of successful and unsuccessful televised social transgressors. Unpublished manuscript, Northwestern University, 1969.

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